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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/995,715    12/22/97    GENNADIEVICH

I    0971/OD319

EXAMINER

WM02/0817

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NEW YORK NY 10022

BRIEF...

ART UNIT

PAPER NUMBER

2672

DATE MAILED:

08/17/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

08/995,715

Applicant(s)

GENNADIEVICH, IVANOV  
ANATOLY

Examiner

Jeffery A. Brier

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 48-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 48-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

Art Unit: 2672

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/06/2001 has been entered.

### ***Drawings***

2. The drawings filed on 02/01/2000 were objected to in paper no. 9 and applicants arguments filed 10/16/2000 concerning the objected to drawings were responded to in paper no. 14. These drawings are still objected to because:

The substitute drawings, figures 1-7, raise new matter issues since these drawings are different than the foreign priority document's drawings and the details of these drawings are not supported by the specification;

Substitute figure 1 is different than figure 1 of the foreign priority document and the shape and/or location of some of its elements is not described in the original specification;

Substitute figure 2 raise new matter because page 13 lines 8-9 states "Kerr effect based double refracting crystal plates 9 are layered over the mirror plates 8 and transparent electrodes 10 are placed between the plates" while substitute figure 2 shows the mirror plates in a position different from that which is described by the

original specification and substitute figure 2 is different than figure 2 of the foreign priority document;

Substitute figure 3 raises matter because the angle of element 13 and the curve of conductor 3' are not described in the original specification;

Substitute figure 4 appears to be acceptable;

Substitute figure 5A fails to illustrate the light rays 17 and the display screen 5 both described in the specification on page 19 lines 2 and 3, also note the specification used 5(a) not 5A to label figure 5(a);

Substitute figure 5B) is mostly acceptable except the specification used 5(b) not 5B) to label figure 5(b);

Figure 5 is not shown but is described on page 19 line 4;

Substitute figure 6 has no detailed description, though, it does have a brief description;

Substitute figure 7 is not supported by the original specification; and

Figure 8 was not provided in the substitute drawings even though it is briefly described in the brief description of the drawings, however, a detailed description of this figure is not present in the detailed description of the drawings.

Correction is required.

***Response to Amendment***

3. The amendment filed 08/06/2001 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the two paragraphs added to page 20 after line 10 and the paragraph added to page 23 line 15 are new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Specification***

4. The new paragraph added to page 20 after line 10 is objected to because the second paragraph has a typo at line 4 where "ne" should be "one".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 48-68 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 2672

Re claim 48:

Claim 48 claims the embodiment described for figure 5(a). In part (b) of claim 48 applicant claims a raster multiplying system comprising an array of mutually connected balanced lightsplitters, each said splitter to deflect a proportional part of the array of N pixels of the complimentary screen as a light beam and transmit the rest of said array to next splitter, to simultaneously form P copies of the raster elements of the complimentary screen, one copy for each of P blocks. The description of figure 5(a) on page 18 last paragraph to page 19 line 3 describes the light rays 17 from the partly transparent partly reflective mirrors are directed to fall onto the display screen 5. In part (c) of claim 48 applicant claims an array of controllable modulators to simultaneously and independently modulate each of the raster elements for each of said P blocks, each modulator having an output to coincide with a block of the image. Clearly page 19 lines 1-3 of the specification does not place the claimed array of controllable modulators between the partly transparent partly reflective mirrors and the display screen 5.

Re claims 48, 54, 57, and 66:

Claims 48 and 54 both claim balanced lightsplitters and claims 57 and 66 both claim balanced beam splitters. The originally filed specification did not describe balanced lightsplitters and it did not described balanced beam splitters.

Re claim 52:

Claim 52 claims *a system as in claim 51 wherein a lens raster matrix forms said raster multiplying system, there being one lens for each block of said P blocks.* The specification describes on page 19 last paragraph to page 20 line 3 *there may also be a*

*non-planar variant where the light direction is mostly perpendicular to the IMM plane (Fig. 5b), e.g., presented by lens raster matrix 30 where light 7, formed by the image producing mean 1, is divided into the number of components corresponding the number of lenses 23.* It is clear the originally filed specification did not describe there being one lens for each block. The specification only described the number of lenses dividing the image into said number of components.

Claim 52 is further not supported by the originally filed specification because by its dependency upon claim 51 it claims using lenses in the holographic embodiment described on pages 20-25. The holographic system was not described as using lenses in the raster multiplying system (described BDS). The specification at page 21 line 17-18 and 21 refers to deflecting matrix 22 and to IMM 22 but it does not refer to lenses.

Re claim 53:

Claim 53 claims *a system as in claim 52, wherein a light focusing hologram forms said raster multiplying system, there being one said hologram for each block of said P blocks.* The originally filed specification for the holographic embodiment described on page 21 did not describe using a hologram as the raster multiplying system. Page 21 lines 17-18 and 22 described using a deflecting matrix not a hologram as a raster multiplying system.

Re claim 57:

Claim 57, like claim 48, claims the embodiment described for figure 5(a). Claim 48 is not supported by the originally filed specification for the same reasons that claim 48 is not supported.

Re claim 59:

Claim 59 claims *59 a method as in claim 57 wherein a raster element comprises more than one pixel and different raster elements overlap on said image display plane.* The originally filed specification did not describe raster elements overlapping on the image display plane. Note page 23 lines 23-26.

Re claim 62:

Claim 62 claims *a method as in claim 57 wherein the step of forming said plurality of blocks of an image to be displayed comprises immediate synthesizing fragments of a hologram without the use of a reference beam, and further comprising the step of generating said hologram as either two or three dimensional holographic image on said image display plane.* The originally filed specification at page 23 lines 9-15 and page 24 lines 12-21 did not describe not using a reference beam to generate the holographic image on the image display plane.

Re claim 64:

Claim 64 claims *a method as in claim 63 using light focusing holograms instead of lenses.* Claim 63 claimed *a method as in claim 62 comprising the use of lens raster matrix instead of an array of balanced beam splitters.* The originally filed specification did not describe light focusing holograms. The specification did describe on page 22



Art Unit: 2672

lines 22-24 "The matrix of holographic optic elements 31 focuses light in a narrow spectral interval corresponding to specter emitted by complimentary scanning screen 1".

The specification on page 22 line 16 describes a holographic optic matrix 30 focusing each block image onto the hologram forming plane 31. However, each block was formed by a space time modulator (page 22 lines 5-6) so holographic optic matrix 30 is not the BDS matrix/lens raster matrix. Thus applicant claim is not supported by the specification as filed.

Re claim 65:

Claim 65/57 is not supported by the originally filed specification because claim 57 claims an embodiment that was not described as forming a hologram, thus, it does not form a holographic hard copy.

Re claim 54:

Claim 54 claims image recording. Image recording is described on page 16 line 14 as "A method for image recording is similar to that of image display as described above". Note the "above". The image display described in the specification corresponding to above did not use the raster multiplying system of claim 54. The description of figure 5(a) on page 18 last paragraph to page 19 line 3 describes the claimed raster multiplying system but it did not describe using it in the claimed image recording system.

Re claim 66:

Claim 66 claims image recording and this claim is not supported by the original specification for the same reasons given for claim 54.

Re claim 67:

Claim 67 claims a *method as in claim 66 wherein a raster element comprises a plurality of pixels and different raster elements overlap on said image display plane.*

The originally filed specification did not describe raster elements overlapping on the image display plane. Note page 23 lines 23-26.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 51-53, 60, and 62-64 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 51 is indefinite because said surface lacks antecedent basis in the claim.

Claims 52/51 and 53/52/51 are indefinite because claim 51 is indefinite.

Claim 60/59/57 is indefinite because it claims *subjecting generated raster elements to additional optical compression.* While claim 57 only claimed *providing a complimentary screen having a two dimensional array of N pixels to generate an element of a raster for a block of an image.* Thus claim 60 is trying to optically compress plural raster elements while only one raster element was produced in the parent claim.

Claim 62 is indefinite because "the step of forming said plurality of blocks of an image to be displayed" lacks antecedent basis in the claims.

Claims 63/62 and 64/63/62 are indefinite because claim 62 is indefinite.


***Response to Arguments***

9. Applicant's arguments filed 08/06/2001 have been fully considered but they are not persuasive in view of the new grounds of rejection.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached on (703) 305-4713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

  
Jeffery A Brier  
Primary Examiner  
Art Unit 2672